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ABSTRACT

An examination of the play situations in which children are successful in learning second languages was undertaken based on observations that children in foreign language settings learn languages quickly in the process of daily play activities. A wide variety of activities were examined, including play phone conversations, soccer, elastic rope jumping, card and board games, role playing, and object-based fantasy. Structural elements examined include play with minimal language, contextualized formulae, turn exchanges, gestural support, imitation, explicit instruction, role assignment, and arguments. It was found that: (1) in different types of games children appear to routinely use their activity knowledge as if there were no language barrier; (2) language use differs considerably in various activities; (3) factors seeming to facilitate learning were redundancy with action that made words meaningful, availability of simple models to copy, and cooperative attitudes by the partner that led to instruction or willingness to interpret the learner's tries; (4) the foundation for children's language learning through play is their prior knowledge of the activity structure of the general game type, or in complex games, the specific game; and (5) the language learned in games varies in complexity, with the easiest to learn consisting of syntactically simple, highly repetitive formulae, and with the social success and sense of participation through the language acting as other benefits. (Author/MSE)

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ACTIVITY STRUCTURE AS SCAFFOLDING FOR CHILDREN'S SECOND LANGUAGE LEARNING

by

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Activity structure as scaffolding for children's second language learning

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It is a common observation that elementary school children learn second languages fast from their friends. While their parents struggle with phrase books, they are out on the playground rapidly coming to sound like natives. They are successful at peer play despite the lack or low level of their language knowledge. Of course this story contains some myths. Not all children learn languages fast.* But even slow children learn some language in peer play. Socially confident children do succeed in playing with peers. Considerable social knowledge has to underlie these transactions. This social knowledge is at the root of the rapid language learning process. It both motivates the learning--because language is necessary to some types of successful transactions--and provides a reference frame for acquiring meanings.

*Even after four years in a school, some can't manage to understand school content. Such children need their own native language support in school or they risk permanent retardation. This is of course the basis for the need for bilingual education to keep children from falling behind in school content.

My focus in this paper will be on the successes. By close observation of spontaneous play between speakers and learners of the same age it's possible to see how children manage to bring about successful play when they have minimal language in common, and how features of the play context specifically facilitate language learning.

My first contact with the issue of successful play was hearing a child report details of a complex game, though he did not yet speak the language of the children with whom he was playing. The semiotician Greimas pointed out to me that this was possible because games are structured in the same ways and so even a new game could readily be understood by observation of structural features. This knowledge could be general, as in the above case, or it could be specific knowledge of the game being played. This kind of knowledge of expected roles, trajectories of action, and likely talk has been clear in other work I have done. For example, in videotaped family interaction involving children under eight observers could predict half the time what would be said next, at least the speaker and act, and often the specific words. Speakers took into account the normal trajectories of action of their hearers in estimating how to make requests. If the action was expectable and part of normal routine, the requests took an unmarked form like an imperative or statement of want.

Play is possible with a minimum of language because children already know the schema for the type of play involved. Play is more possible without language for some games than others. Some games are almost entirely physical and can occur with no speech whatsoever. Even these games usually require verbal negotiation at the start or at cer-

tain critical junctures. These might be identifying who is to start, whose turn it is, when a violation has occurred, or to announce some accomplishment. But this talk may be so routinized as to make very limited demands on language knowledge. It may consist merely of a list of names or titles of acts. Other games are potentially entirely physical but as normally played are accompanied by so much talk that they may be seen as primarily a vehicle for social talk or for argument. Some card games are good examples. At the opposite extreme are games that depend heavily on verbal knowledge and cannot occur at all if language cannot be understood.

The cooperative attitude of partners is an important feature of successful play with a minimum of language facility. Since information is not available about the wants or ideas of one partner, except minimally, the knowledgeable partner has got to be willing to guess what might be intended. We have found that the capacity to guess the trajectories of others, except in routinized cases, increases markedly after school age. Successful types of play must be extremely routinized in the earlier years unless there is good communication.

What about language learning? Language learning always has two prerequisites. One is the motive, exposure, and capacity to find language patterns, overt or hidden. The other is the opportunity to relate these patterns to referents and to conditions of use. It is the second prerequisite which is most relevant here.

There are always conceptual prerequisites for language learning. For example, relatively early children learn ways of indicating transitivity and aspect. Structural signals for these features vary with

language. What is clear is that the child has to understand the conceptual basis for these features in order to acquire the structural signal, whatever it is. That is, these concepts have to be present already for language learning. That seems to be true at the earliest stages. Later of course, language may also guide concepts. What I propose today is that there are social bases comparable to the conceptual bases for language learning.

Suppose kids are playing a card game. One of the kids says "you deal." In saying this, the child is making a directive, naming an action, at a certain point in the game. The word "deal" refers to a characteristic action pattern, the same as in "he's dealing" or "he dealt me 5 cards". But as a specific directive, it has appropriateness conditions. To say "you deal" in the middle of a hand would be heard as referring to the future, oddly placed, or to imply the hand is over. If dealing alternates, to say "you deal" when the partner dealt the last hand would also call up special accounts for the proposed change. Thus even this simple term has a set of presuppositions relating to activity structure. These are that only one person deals, that deals occur before hands, and in some games that the dealer rotates.

A learner with prior knowledge of the activity structure within which the new language is used is advantaged. Watching language learning in the context of activities helps us identify prior knowledge.

One way to see what facilitates learning is to see what conditions make children talk best. It is clear that language is elaborated most rapidly when it builds on already available knowledge and interests in very specific ways. Labov has made this approach familiar by showing

that social conditions radically alter speech complexity in black children.

Child-chosen topics are most productive of speech. With toddlers what we see is that talking about the here and now facilitates. Talking about the nearby but not visible is more difficult. Talking about fantasy is easier than about the past which is hardest of all. Physical activity or construction helps. Partners' talk can help, by supplying questions, relevant comments, staying with the child's topic, and with what is understandable from context, and modelling some things to say. This is commonly called scaffolding.

I think it can be argued that school children's play has all of these features. It tends to refer to the here and now. That makes it easy for the learner to identify referents. It often involves construction or activity. And partners do a lot of scaffolding, although of course it is unwitting, just as it frequently is for adults.

In sum, we can expect children will learn language from peer games when they are interested, when they share enough knowledge of the activity to know what is going on without needing explanation, and when the language used is interpretable from the context. Language is especially easy to learn when the roles permit mirroring. An example is greeting, which is often reciprocal. A learner who cannot determine what to say from a model because the roles are complementary has to have a partner willing to teach by supplying models of what to say.

We can expect children will not learn from games when they don't understand the game, when they are not interested, when you have to know

too much to play, when the game depends much more on language than on actions.

The data cited below are from two studies. One is school-based with observations of Chinese- and Spanish-speaking children in California schools. The other is a study of English-speaking children playing with French friends in their homes. In both groups language exposure is less than a year. The first children were five and six, the second five through twelve.

1. Activity types

The activities about which I shall speak today are of five types. They vary in activity content, importance of verbal information, and structure. These are telephone conversations, simulated soccer, card and board games, Chinese jump rope (elastic cord), and role play or fantasy games.

1.1. Play phone conversations

Telephone conversations are purely verbal, though young children sometimes act as though they were not, for instance by showing objects to a homunculus in the receiver. They can structurally be described as follows:

Greeting

Entry

Core

Farewell

The components of these exchanges vary in elaborateness. An eighteen-month old child, for example, was heard on the phone saying "Hi fine bye." She revealed the most simple one-party structure, Greeting, reply to an Entry, and a Farewell. The easiest parts of the phone conversation to learn are the Greeting and Farewell, since they are usually mirrors. That is, the learner can just copy the partner. The Entry is not a mirror but complementary with its reply. It is usually conventionalized and may have to be taught, unless the child can overhear a model. The "fine" of the above example must have been overheard. The Core is the most structurally complex section since it contains any talk whatever. Replies to Core can, however, be conventionalized. Their learning may derive from learning formulaic replies outside of the phone context. In examples later we will see how the learning of Entries and Core begins. The telephone conversation is the extreme of a scripted entirely verbal activity which can be taught by modelling, with the exception, of course, of the conversational core.

1.2. Soccer

At the opposite extreme is a soccer game, in which the role of speech is minimal and learning is primarily from observation and action. It is not surprising that teams that do not share a language can play soccer. Those items which require language, such as calling a penalty, can be indicated by conventionalized gestures. In field conditions, language does play a role at critical junctures including identifying a goal, points, and penalties, and serving as a vehicle for emotional expression, encouragement, and advice.

There is a a second type of language that goes with soccer games.

That is TV announcing of games, which is a special register. It includes the announcements of goals, points, and penalties, (but much more elaborated in syntax), and of course a lot of descriptive talk.

A third type is the commentary of observers who are not players, which is less likely to contain announcements and contains more emotional expressions, encouragement, and advice. These three types may be called the registers of players, announcers, and observers.

My data on soccer come from a board game which involved skill. The French speaking partner primarily used a TV announcer format. The learner's speech included both the normal speech used in playing the game--he was, after all, playing an exciting game at the time--and considerable observer talk, which was complementary to his partner's TV register. Both boys were twelve and experienced soccer players.

Soccer has a clear activity structure. The start is a kick. Who does it is specified by who is receiving benefits: at the start the winner of a toss, later the team scored against or the defenders when a team has kicked out the ball. The ball is kept in motion in order to achieve goals against which a goalie defends. In turn games such as card games, the participants alternate in action. In soccer, as in many sports, both teams are usually in action at once. Turns apply to large units and involve such issues as territory or role alternation. For example, if the ball leaves the field at the side it is tossed in by the team which did not kick it out, at the spot it left. If the ball leaves the field at the end, but not in the goal, it may be kicked in at the corner--a corner kick by the offensive team. Altercations are over conditions which decide who will re-start, where, and how. (e.g. where did

the ball leave the field, who kicked the ball last) and whether some rules have been violated. Fouls occur as rule violations, such as shoving, or touching the ball with th hands, or improper positions of forward players. Since the game cannot be played without agreement on these points this communication is essential.

But this essential communication is not all that occurs. In addition there is "teaching", or advice to players about what to do--kick, get rid of it, pass, shoot. And there is evaluation of what has been done--wow, super, idiot. All of this language in the game and observer registers is very simple structurally, easily learned by copying, and is highly contextualized so that it is obvious what it refers to. A novice player who simply watches the sequence of events could induce the rules and have a ground for understanding the words used in the altercations.

The TV announcer register, on the other hand, is structurally very complex. Although it is referentially clear, its complexity makes it much more inaccessible to novice speakers than the observer register.

1.3. Elastic jump rope

Chinese jump rope or elastics is a game two or more can play. An elastic loop is attached around either a chair or the legs of two children. The resulting parallel of elastic marks a space within which one child jumps up and down doing foot manoeuvres. The jumping in Chinese jump rope (jeu d'élastique) involves a specified number of repetitions of the manoeuvres. The difficulty increases through the game. The turn shifts when the child makes a mistake. The difficulty of the actions depends on such factors as how high the cord is on the outside children,

whether around ankles, knees, or hips. The difficulty regularly increases in respect to this feature. The children may let the player choose the complexity of the jump, and each group of children develops its own set of favorite manoeuvres and terminology for them. Manoeuvres involve jumping in and out of the elastics, stepping on the cord, catching the elastic on the legs and twisting in various ways without breaking the sequence. In contrast to old-fashioned cord jump rope, there is no activity by the outside children, no rhythm to maintain relative to a turning rope, hence no verses. Outside children also have no control over rate, in fact their passive role gives them a great investment in close observation of the jumper's failures. It is the failure of the jumper that gives them their turn.

Necessary talk includes establishing turns, identifying who starts, setting height of the cord for each new child, and calling failures. Because there are disagreements about the definitions of failure and the exceptions to be permitted, the largest amount of negotiating talk surrounds failure. Some teaching talk can occur, involving describing manoeuvres. But because the moves are complicated they are not easy to describe or teach verbally. Also because jump rope is not a team game, there is less of the 'observer talk" register that is found in soccer, involving directives and evaluation.

1.4. Card and board games

Card and board games played by the children had certain features in common.

a) They involve games of short duration which require repeated setting-up, or dealing of cards.

b) Dealing of cards occurs at the beginning of each game, and involves mixing the cards up, (shuffling), passing them out in a fixed order so that cards are random in distribution. Distribution continues until a fixed number of cards for a hand is received by each player.

c) Starting may occur under special conditions, such as highest card, position relative to the dealer, or highest dice toss.

d) After starting, turns have a fixed order and no player can play until the preceding player is finished.

e) In some games the events in a turn are physical, such as moving a piece on a board after tossing dice, picking a card up from the pile, discarding, arranging sets of cards such as three of a kind. Some games require verbal negotiating, such as asking for particular cards in the game of "families" (like Authors). Some games require particular announcements, e.g. "checkmate."

f) Turns rotate until a criterion of success is reached by one or more players. At this point the game may end, if there is merely a win or lose alternative. In some games points are accumulated or players are ranked by continuing to compete with survivors.

Principles a,c,d,e, and f apply also to other games such as soccer and jump rope. The talk surrounding these games turns on negotiating what game to play, who is to set up, who is to start, whose turn is next in multi-party games, announcements of intentions or results, and disputes about whether someone has won. In all games, of course, there are issues to negotiate about rules, though the complexity of the game and its flexibility can alter the likelihood of such disputes.

Some games are difficult to teach from demonstration. In these

cases they are only possible if the partners already know the game. In other cases, we do see teaching by doing. Language is typically learned by copying, since roles tend to be repeated in these games.

1.5. Role playing

Role playing games were of two kinds. One type involves pre-structured roles which have fairly defined activity schemata associated with them. Examples are Teacher, which invokes a classroom scenario with content potentially extracted from whatever the child's classroom currently contains--math, reading aloud, and punishments. Nurse implies patients, objects, and activities like taking temperatures and wrapping bandages.

The invoking of role games of this type brings into play disputes about who will play what role, since the named role is likely to have more power, more interesting possessions, more obvious activities to undertake, and less complicated negotiations needed to get what one wants. There are often obvious complementary roles, such as pupil, baby, mother, sick people. Once the main role is pre-empted, the partners have to scramble for the most desirable remaining roles or to define what they will do in a way to make the roles interesting. This might involve creative choices among the alternative trajectories available in the main scene. For example, a pupil might refuse to comply.

In other named roles like Princess, the activities are much less clear and may have to be spelled out. If the indications for activity can be shown non-verbally, the novice speaker may be able to manage. But it seems clear that more fixed role schemata should be easier to for

collaboration than novel schemata--unless these are under the control of the learner.

2. Play with minimal language

When children share very little language, their play choices may be constrained. Two twelve year old boys, for example, rejected playing Monopoly since it was too hard to teach a novice player. They opted for Battleship. In this board game, all that is needed is communication about locations, then an announcement about whether a ship was sunk. Even with this simple task there were problems. Since the locations were indicated by a number-letter grid, the different pronunciations of the letters E, G, and J in French and English created confusion. The boys resolved these ambiguities by writing in the air or pointing to printed letters. Also in this setting the dominance of the French speaker was reduced and both used each other's language (letter pronunciations).

2.1. Predictable activities.

2.1.1. Soccer

In the data were some highly successful play episodes in which the anglophone had a month or less of exposure to French. Among these was the table soccer game. It appeared that the anglophone boy knew the activity structure perfectly from his own English experience as a soccer player. He showed evidence that he knew about starting, restarting, goals, scores, and penalties as constrained in the description above. He also had been exposed to playing field soccer already at a francophone school and informally outside of school. His knowledge of the

game made him a very successful partner. This success, in turn, kept the two engage long enough for some new language learning to occur, as described below.

2.1.2. Role play

Seven year old Nell successfully played the teacher role despite very limited French by establishing a series of scenes which were familiar classroom activities. One was teaching to read. Pupils read passages successively, the teacher taught commutation in multiplication, and the teacher ordered the pupil to certain locations and punished her failure to comply, by whacking with a stick. All of these scenes were direct emulations of scenes from the French village school:

(1) Nell: C'est moi la maîtresse. Alors, excusez moi, tu viens ici...derrière les enfants. Tu viens ici. Et quoi, c'est quoi, toi. C'est quoi, le nom à toi? I'M THE TEACHER. SO, PARDON ME, YOU COME HERE BEHIND THE CHILDREN. YOU COME HERE. AND WHAT, IT'S WHAT, YOU, IT'S WHAT, YOUR NAME?

F: Stéphanie..(long discussion in which a name is negotiated).....

Nell: (gets out slate): Sept.(writing on slate) Attends, attends, c'est ça, bon. Mais deux fois sept égale--- SEVEN. WAIT, WAIT. THAT'S IT, GOOD. TWO TIMES SEVEN EQUALS---

F: Quatorze. 14

Nell: ou? OR?

F: Sept fois sept-- 7x7--

Nell: Sept fois deux égale quatorze... 7x2=14....

Nell: Mais, tu comprends, eh? YOU UNDERSTAND, DON'T YOU?

F: Oui. (runs into corner)

N:ll: Non, tu viens là! Tu,Tu,Tu attends la. Viens par là. Stéphanie, Stéphanie, allez vite. A toi. A toi. Non! NO, YOU COME HERE! YOU, YOU, YOU WAIT HERE. COME BACK HERE. STEPHANIE, STEPHANIE, HURRY UP. ITS YOUR TURN. YOUR TURN. NO! (runs after pupil with a little stick while both giggle.)

In this classroom scene the familiar scenarios are Teaching math, Teaching commutation, Checking, and Naughtiness punished.

2.1.3. Object-based fantasy

Even fantasy games could be successful if the knowledge of their basic conventions was shared. In the following scene five year old Kate leads a French visitor, Eric, to two cardboard cartons, and climbs in one:

(2) K: En bateau, viens. IN THE BOAT, C'MON.

K: Bateau, bateau. BOAT, BOAT..... (They both get in boxes and continue talking)

E: Attention! rrrrrrrrr. LOOK OUT! (motor roars) (K talks to herself in English)

K: En bateau. Houp la, en bateau. IN THE BOAT, IN YOU GO, IN THE BOAT.

E: J'aimerai doubler....la route...rrrr. I'D LIKE TO PASS...THE ROAD...

K: Mets pas tes pieds la. DON'T PUT YOUR FEET HERE.

K: Attention! LOOK OUT! (both tip over laughing)

K: En bateau!

E: En bateau! Au seccurs! On change de bateau. IN THE BOAT! HELP! WE'RE CHANGING BOATS. (They climb in each other's boat)

In this scene, there is a bit of parallel play in which Kate talks to herself in English and it seems that Eric may be in a car rather than a boat, but it may merely be two passing motorboats. The major impression of the scene was the high degree of success in joint play, with the Francophone even emulating the novice's turns. This success seems to come from the fact that imagining entering and driving boats/cars, passing, possibly crashing, tipping over, and exchanging vessels is a standard exploitation of a familiar theme.

2.2. Contextualized formulae

2.2.1. Soccer

The highly situated use of language makes new terminology or new phrases intelligible even to speakers who know relatively little. The routines of soccer were conspicuous by their repetition. The learner, despite his extremely limited French, was very vocal. He was extremely excited by the game. He spoke on almost every move, mostly to express excitement. He already knew such vocabulary as the French for shoot, goal, get-rid-of-it (dégage), penalty (which he pronounced as a French word), and such French exclamations as "bravo" and "oo la la", praise such as "well played" and of course counting for the score. Some turns might be verbally limited, like "Wow," or "Ooh la la" and others were more elaborate, like "S'il te plait, non" PLEASE NO. He also evaluated plays, as in "Oh, super, oh. Corner, Keegan, super, Keegan." (Keegan is the name of a well-known player.) He named or called plays, as in:

(3) Keegan, but. Dégagé! GOAL. GET RID OF IT!

The learner's ability to evaluate and to name plays rested on his prior knowledge of the sequence of events, along with the vocabulary to produce a reasonable participation verbally as player and observer, though his topics were much more restricted than his partner's (the partner used TV announcer register). He talked of goals, shots, getting rid of the ball (dégagé) and listed the score.

2.2.2. Turn exchanges

Another routinised context was negotiating turns. Turn exchange is a fundamental principle of games. The terminology of turns is essentially property or territory claiming terminology, such as "Mine", which is among the first moves learned by children in both first and second languages. For example, in the soccer and card game session of the English child in France less than a month, already there is:

(4) Merci. A toi. OK. THANKS. YOUR TURN. OK.

A more advanced exchange is a series listing for successive turns in a group as follows:

(5) E1: C'est toi (to E2) IT'S YOUR TURN.
F1: C'est moi, Rachel. IT'S MINE, RACHEL.
E1: Et puis toi. AND THEN YOU.
E2: Et puis moi. AND THEN ME.

A more complex exchange is turns in playing roles, as in this very early example:

(6) F: Qui c'est qui commence à être la maîtresse? WHO STARTS AS THE TEACHER?

Nell: C'est quoi la maîtresse? C'est moi le maîtresse premier, et donc toi, et après, toi le maîtresse. Tu comprends? WHAT'S THE TEACHER? I'M THE TEACHER FIRST, THEN YOU AND AFTER, YOU ARE THE TEACHER. UNDERSTAND?

Examples like these appeared in almost every game from the earliest stages.

2.2.3. Telephone play

Telephone play provides good examples of learning because of the predictability of routines. In our second-language data, we found a five year old with a dialog system, but as simple as "Hi fine bye" in the replies given:

(7) Greetings: <Hello>-Hello.

Core: <Question or statement>-Yes.

Farewell: <Bye>-Bye.

This was a child whose knowledge of French was very simple. Her incomprehension of the questions is shown in the following:

(8) (I won't stop it [cassette] if you say so.) -- Yes.

In her case, structural knowledge let her participate in boundary greetings and farewells but was too primitive for her to get into a core, which called on vocabulary about topics.

Phone conversations contain scripted segments at the beginning and

end. These routines are learned fast. They are similar to other encounter routines, and are modelled by the partner. The problem is going beyond the routine. In the following, a Spanish speaker after 7 months in English replied to an entry, although the routine was mismatched.

(9) Rosa: Hello

Emily: What's you doin?

Rosa: Fine.

Emily: My mommy told me to go to school.

Rosa: Me too.

Emily: Ok bye. I'll call you back tomorrow.

Rosa: OK Bye.

In this conversation Rosa (Spanish-speaking) has formulae for Greeting, Entry, and Farewell. The formula for replying to an Entry doesn't differentiate between the two possible entries, "how are you" and "what you doin". In fact Emily's entry, "What you doin", is more typical of these children. The reason for Rosa's reply is clear. "Fine" is a semantically empty routine. Replies to "What you doin?" require more productive skill. The Core requires productive skill too, but the child's formula, "me too" appropriately fills the turn.

2.3. Gestural support

These examples have shown that even with very simple language knowledge, children can play successfully on the basis of their activity knowledge. A major tactic for solving the limitation in their language knowledge is to use gesture for communication and for teaching the

partner.

2.3.1. Card games

Card games have such predictable properties that it is relatively easy to teach the common games. In the following situation the novice is trying to teach a game in which the person laying down the higher card takes the pair.

(10) A toi

Moi

Toi.

Moi!

Six, sept.

Trois quatre. Toi.

Neuf huit.

Wow!

Merci.

A toi.

In this sequence the teaching was done entirely by naming an outcome and letting the situation teach, until a reversal on the fifth move to naming the circumstances and on the sixth to naming both. The sixth move can be glossed as "If I have three and you four, it's yours."

When the same boy (twelve) tried to teach how to play a more complex game, Snap, in which the winner is the one who says "Snap" first when the cards laid down by both players have the same number, he had to demonstrate:

(11) Two, two, Snap, OK?

So, Marcel, pair, OK?

2.3.2. Soccer

The most elaborated efforts to communicate occurred when he wanted to impose a penalty, and did not have enough vocabulary to explain. First, he set up the idea of what a penalty kick would look like:

(12) Marcel! Tu(gestures) ...comme ça. Balle...tzn! Peral-ty. OK?

Marcel! YOU....LIKE THAT. BALL.....tzn. PENALTY. OK?

The missing semantic elements, the verbs, were acted out.

Having established how to act out a penalty in the game, the boy asked for a penalty when his opponent's man bumped one of his:

(13) Marcel! Tu....[shoves Marcel]...pen-al-ty. OK? Yes? OK.

Although the game was highly successful and the actions were well coordinated, there were some differences in how language was used. For example, in the second soccer session a month later the francophone continued in the third-person vein of a TV announcer, whereas the anglophone, in the interchanges involving the same scene, used first and second person pronouns as if he were an observer or player.

2.3.3. Role-playing

Even in role-playing games knowledge of structure can make moves intelligible, if they have enough gestural support. In role play the first moves are to identify the cast of characters and who will play what part and with what props. In the following scene, Lee, the older

sister, chose the most desirable role, Nurse, with all its equipment. She sent her guest out of the room with her younger sister until the Nurse was ready to receive pa' ents. So the other two had to negotiate the remaining roles:

(14) Ariel: Qui va être la maman, et puis la soeur, eh? WHO WILL BE THE MOM, AND THEN THE SISTER, HUNH?

F: Moi. Moi, je suis la maman. ME, ME I'LL BE MAMA.

Lee: La soeur? THE SISTER? (getting out nurse gear)

F: C'est moi la maman. I'M THE MOM.

Lee: Oui . (continues taking out gear and arranging)

F: C'est qui l'enfant? WHO'S THE CHILD?

Ariel: Moi . ME.

Lee:C'est Ariel. IT'S ARIEL.

F: Regarde. LOOK (playing with stuffed animal)

Lee: C'est quoi? IT'S WHAT?

Ariel: Ils sont nos bébés. THEY'RE OUR BABIES.

F: Ils sont les bébés. C'est eux qui sont malades. Viens. On va à la maison. On telephone à toi. Oui. Oh, ils sont malades. Il faut téléphoner a l'hôpital. THEY ARE OUR BABIES. IT'S THEM WHO ARE SICK. COME ON. WE ARE GOING HOME. WE're GONNA TELEPHONE YOU. YEAH. OH, THEY'RE SICK. WE HAVE TO TELEPHONE THE HOSPITAL.: (they go to Ariel's room to wait).

Ariel: Non, elle est allée dans mon lit. No, she's in my bed.

In this scene the novice participant who was younger than the other two succeeded in renegotiating the roles. Being a baby with two adults did not suit her, so she took the presence of the animals as a chance to

become on a par with the older French visitor, who, herself excluded by the Nurse, was eager to cooperate. A good deal of the ...aunge which followed while they waited the Nurse's permission to visit was accomplished by Ariel's careful preparation of beds, culminating in her sabotage of the Nurse by bringing a mattress to the hospital and then stealing some Nurse gear. Neither her age nor linguistic handicap prevented this resistance and restructuring of the play.

The Nurse scene was a role with pre-structured complementary roles such as mothers and babies who could be patients. Linguistically unskilled anglophones also succeeded in efficient play in more unstructured roles, as in the case below where five year old Kate succeeded in directing the play of her visitors:

(15) Kate: Toi le petit princesse et moi le grand princess et Michel le grand...roi. YOU THE LITTLE PRINCESS AND ME THE BIG PRINCESS AND MICHEL THE BIG...KING.

le princesse. Et elle et moi dors. Et et toi viens et et et donnes ... ça. EH, YOU SANTA CLAUS, NO, MICHEL SANTA CLAUS. AND YOU THE PRINCESS AND ME THE PRINCESS. AND SHE AND ME SLEEP. AND AND YOU COME AND AND AND GIVE THE THAT.(pointing to music box)

Véra: Non, j'ai reçu ma noel. NO I'VE HAD CHRISTMAS. Kate: Non, parce que Noel est est le garçon. C'est toi le noel. NO, BECAUSE NOEL IS A BOY. IT'S YOU NOEL. Ding dong (K. hides her eyes). Toi ça, toi ça, ça (music box). YOU THAT YOU THAT. Oui et oui, toi, et toi vilain, comme ça, et comme ça. Comme ça est vilain. (shows spanking, then covers her eyes pretending to sleep) (Michel spanks) YES AND YES, YOU, AND YOU NAUGHTY, LIKE THAT, AND LIKE THAT. LIKE

(18) Sophie: Premier! FIRST!

Georges (younger brother): Je peux jouer? CAN I PLAY?

Ruth: Si tu veux, oui. IF YOU WANT TO, YES.

Sophie(older sister): Non, non, nous trois. NO NO, US THREE.

Britt (younger sister of #1): Nous trois. US THREE.

Sophie: Seulement nous trois. ONLY US THREE.

Ruth: Non, ca va mieux avec quatre. NO, IT'S BETTER WITH FOUR.

In this case, the younger anglophone (Britt) collaborated with the francophone, and merely repeated "nous trois." Her older sister, who was much more competent in French, not only recognized the self-invitation but disputed Sophie's decision and defended her view with an argument.

3.1.2. Soccer

The soccer game was filled with instances of learning through immediate repetition. As the partner gave his TV commentary he produced many examples of vocabulary concerning the game with the learner picked up .

(19) Marcel: C'est un but super. IT'S A SUPER GOAL. br. Carl: Oui, super.

Marcel: Le gardien dégage. THE GOALIE GETS IT GOING.

Carl: Dégage, oh, non. GETS IT GOING. OH NO.

3.1.3. Board games

Predictable board game activities provide routines which can be named and the names copied. The cycle of finishing and re-setting the pieces of the game for a new round keeps presenting the same categories

for naming.

(20) Anne: On change de jeu, eh. LET'S CHANGE GAMES HUH.

Karla: Je suis..I'M...

Anne: Non, on change. NO, WE'LL CHANGE.

Karla: Ah, oui.

Anne: On range. WE'LL PUT THINGS AWAY. (begins to)

Karla: On range.

3.2. Later copies

In addition to immediate copying, there are delayed copies, in which the new terms were stored and used later, as in these examples.

3.2.1. Soccer

(21) Marcel: Voilà un tir très haut que nous ne pouvons pas suivre avec le camera, un tir...(ball shoots) HERE'S A SHOT THAT'S AO HIGH THE CAMERA CAN'T FOLLOW IT, A SHOT..

Carl: oh non.

Marcel: Personne au centre. NOBODY AT CENTER.

Carl: Un tir, ooh. A SHOT, OOH.

(22) Marcel: Vraiment superbe ce but. REALLY SUPERB, THAT GOAL.

Carl: C'est un...oh là là. IT'S A..OH OH.

Marcel: Bon, et voilà un attaque encore. GOOD, AND HERE'S ANOTHER ATTACK.

Carl: Oh non.

Marcel: Les rouges dégagent par leur gardien, et un rouge est à position sur la balle. THE RED GOALIE PUTS THE BALL IN MOTION, AND

A RED IS IN POSITION WITH THE BALL.

Carl: Oui.

Marcel: Et il marque un but magnifique! HE MAKES A MAGNIFICENT GOAL!

Carl: Keegan, superbe.

The speaker may simply see the term "tu commence" as a directive routine located at the beginning of the game cycle.

3.3. Explicit instruction

Of course, partners can teach language directly. This did not usually happen in the high-activity games since meanings mapped so readily and vividly. It does happen in phone conversations which are not scaffolded by physical redundancies. How the child Entry is learned is revealed in the following text from Fillmore, 1976:

Nora (Spanish-speaker): Hello. Come to my house, please.

E: Who are you?

Nora: Nora.

E: Nora, you've got to say "What are you doing?"

Nora: What are you doing?

E: Making cookies. What are you doing?

Nora: Making cookies, too.

E: Ok, bye.

Nora: Bye.

In this text, the friend criticized Nora for leaping into an invitation without an appropriate entry. Invitations normally precede the farewell. In this case the friend explicitly taught the Entry form.

Because the reply to the Entry is too demanding, Nora simply copied the model.

3.3.1. Board game

In the following card game called "Twist", the player lays down a card which must be matched either in suit or number by the next player. If that player cannot do so, a draw from the deck is in order.

(23) Anne-Marie: C'est quatre, one up. IT'S FOUR, ONE-UP!

Ruth: Un di de carreau. A TEN OF DIAMONDS.

Anne-Marie: Dix ou carreau. TEN OR DIAMONDS.

Ruth: Dix ou carreau, oui.

Britt: Allez, Anne-Marie. GO ON.

Anne-Marie: Très bien, Ruth, je t'applaudis. VERY GOOD, RUTH. I CONGRATULATE YOU.

In this text, Anne-Marie clearly plays the teacher role, correcting both the phrasing and pronunciation of Ruth, and even stops the game to evaluate, as a teacher should.

In the following game of "Jeu de familles" the learner both makes an error of pronunciation and a mistake in identifying what she wants. In this game players ask for a specific card which is identified by family (in sets of four) and by number or identity.

(24) Nell: Tu as des familles des cer? HAVE YOU FAMILIES OF DEER?

F: Le quoi? WHAT?

Nell: Cer.

F: Cerf?

(pointing to C's forehead)

C: Well, you'll have to run very fast.

B: When you grow up and you steal, your wife isn't going to like you.

Arguments are entirely verbal. There is no way that the punch line in this argument could be learned from any ritualized seqence like the activity words in routines accompanying action or even the script of phone conversations. This shows us the limits of the scaffolding supplied by activity supports and scripts such as phone convereation frames.

1. Conclusions.

Our original question was how children accomplish successful play when they share language only minimally. We hoped through studying such interaction to find what presupposed structures are present in children's knowledge of activities, how language is used in different types of play, and how the prior knowledge scaffolds the child's verbal interaction and language learning during play, or failing that what remedies a child has whose language knowledge is too primitive for the demands of the game.

1) We found that in different types of games children appear to routinely use their activity knowledge as though there were no language barrier. Certain issues were highlighted repeatedly in the games, namely turn taking, rules, penalities, identifying successes, and negotiating differences. These are quite typical of monolingual play, too.

2) Language use differs considerably in various activities. We

have differentiated between four types of talk in games: essential, social-expressive, dispute, and secondary registers. Non-verbal games are those in which talk is not only not essential but interferes. In some physically organized games such as sports, talk is not essential but other kinds of ancillary talk is frequent. Actual playing does not require language except to identify major events that mark changes in activity. The expressive talk accompanying games is interpretable because it accompanies unambiguous action. Disputes can be hard to learn because they may be syntactically complex. There are some optional additional talk types, like observer advice in soccer which may have high learnability, while others, like TV register, are hard to learn.

3) Factors which seemed to facilitate learning were redundancy with action which made words meaningful, availability of simple models to copy, and cooperative attitudes by the partner which led to instruction or willingness to interpret the learner's tries.

4) The foundation for the children's language learning in play is their prior knowledge of the activity structure of the general type or in complex games the specific game itself.

5) The language learned in games varies in complexity. The easiest to learn appear to be syntactically simple, highly repetitive formulae. These are probably the least "progressive" from the standpoint of syntax variety and complexity. The child's social success and sense of participation through the language are different benefits.

Ervin-Tripp, Susan M. Social Process in first and second language learning. In H. Wimitz (ed.) Native language and foreign language acquisition. Annals of the New York Academy of Science, 1981.

Fillmore, Lily Wong. The second time around: cognitive and social strategies in second language acquisition. Unpublished doctoral dissertation, Stanford University, Stanford, California, 1976.

Labov, William. The logic of non-standard English. Georgetown Monographs in Language and Linguistics, 22, 1969, pp. 1-22, 26-31.

THAT IS NAUGHTY.

(Later)

Kate: Attends, et ça pour Noel, ça de, ça pour elle et ça pour moi. (gives chain to Noel to give V, and necklace for herself.) WAIT, AND THAT FOR SANTA CLAUS. THAT FOR HER AND THAT FOR ME.

Michel, moi tout ça après, moi tout ça après. MICHEL, ME ALL THAT AFTER, ME ALL THAT AFTER.

Michel: D'accord. OK.

The remarkable success of episodes like this, which have relatively primitive language but a lot of reliance on gesture, depends ultimately on the cooperation of partners. What was most striking about these episodes was how clearly the social dynamics came through. Younger siblings sometimes succeeded, despite their more abbreviated French, in dominating the play of the older children, when there was sibling rivalry. Just as limited vocabulary restricts play only slightly, limited language does not hobble the children who want to disagree or dominate or govern the types of play.

3. Language learning language through play

3.1. Imitation

The most obvious examples of the learning of language through play were immediate repetitions of the utterances of the other players.

3.1.1. Jump rope

In the following text, a dispute develops over whether catching a heel in the cord counts as a failure or not. As in the earlier turn-

taking argument, F1 and E2 seem to be allied against their siblings.

(16) Ruth: Ah failli! Talons comptent pas. MISTAKE! HEELS DON'T COUNT.
Sophie:(jumper) C'est talons! IT'S HEELS.
Britt: C'est talons. Allez! IT'S HEELS. GO ON!
Georges: Failli! MISTAKE!
This argument went on through twelve turns . The least experienced French speaker was Britt, who in such arguments typically copied a model..

The talk in the jump rope scenes was always about the activity. It was not formulaic however. There were a narrow range of topics, whose turn it was, where the elastic was to be set, whether a mistake had occurred, whether certain mistakes counted, how to do a particular move. Because of the narrow range of issues, the talk is relatively interpretable from context. In jump-rope a critical point is the negotiation of turn exchanges by calling mistakes. Then there can be disputes about exemptions:

(17) In this scene, Anna had caught her heel on the rope. E1: Ah, failli! Talons comptent pas. Talons comptent pas. FAULT! HEELS DON'T COUNT. HEELS DON'T COUNT.
Anna: C'est talons, hein? IT'S HEELS, HUH?
E2: C'est talons. Allez! IT'S HEELS. GO ON!
In this scene Betty gets i' by picking up on the phrase of Anna and adding to it the formula for continuation.

In the following Chinese jump rope scene, there is a dispute about both who will play and who will start:

Nell: Oui.

F: Le combien? WHICH ONE?

Nell: Cerf. DEER.

F: Le combien. WHICH ONE?

Nell: Cerf, tu comprends? DEER, UNDERSTAND?

F:Oui.

Nell: Non?

F: Non. Le le un de la famille cheval. NO. THE THE ONE FROM THE HORSE FAMILY.

Nell: Non. La famille de chien. NO. THE DOG FAMILY.

F: Le combien. WHICH ONE?

Nell: Chien. DOG.

F: Le quatre? La grand-mère?

Nell: Oh oh. Attends, le quatre. OH OH. WAIT, THE FOUR.

F. Le quatre?

Nell: Oui. Family , uh, le family de chat. Oh, trois, merci. YES. FAMILY, UH, THE FAMILY OF CATS. OH, THREE, THANKS.

Turn shift is so familiar (wait your turn! take turns!) that it is a basis for learning new vocabulary. In the following scene the anglophone knows almost no French. Although she is thirteen, her French is so primitive that her friend speaks "foreigner style" to her.

(25) Anne: Tu as gagné. Tu premier, toi, un. YOU WON. YOU FIRST. YOU, ONE.

Karla: unh.

Anne: Alors, toi go, toi. Tu commence. SO YOU GO.YOU. YOU START.

Later:

Karla: Uh je suis jaune et toi rouge, uh. I'M YELLOW AND YOU'RE RED.

Anne: Tu commence, tu commence. YOU BEGIN. YOU BEGIN.

Karla. Comm--uh.

Anne. Tu commence, oui. YOU START, YES.

Later:

Karla: Quel- quelle-couleur- couleur? WHAT- WHAT- COLOR- COLOR?

Anne: Uh, ben jaune, jaune. WELL, YELLOW. YELLOW.

Karla: Tu commence. YOU BEGIN.

In this case the referent for the word "commence" is obvious from the activity sequence. The anglophone knows the words "tu" and "toi" so she knows the utterance is about her. She also knows that a restart is in order. So she infers correctly what "commence" must mean. Yet the meaning of "start" is not tangible. It refers to beginning a new game, which is a construct based on an abstract notion of the game as a cycle.

3.4. Problems

Language weaknesses are important to examine too. There are obviously cases where communication fails. What makes these different? Recourse to the mother tongue is one kind of evidence, recourse to the experimenter to explain, cases where the partner's speech is simply too complex to copy. We have already noted that Carl's soccer speech was much less complex than Marcel's and often had to be responsive to the game rather than to Marcel's TV announcer speech.

In the following cases, there seemed to be some defect in explanation because the complexity of idea surpassed the language resources.

(26) (Marcel took a pair of cards Karl thought he had won) Carl:

Marcel: oh.

Carl: Whoa! (shakes finger)

(27) Britt: Pas ça. Non, pas un carreau. Deux, c'est spécial. Est-ce...si tu n'as pas un deux, alors tu, uh, deux cartes. Alors, c'est pas toi, c'est pas toi, c'est Ruth. Ruth, it's your turn to begin. NOT THAT. NO, NOT A DIAMOND. TWO IS SPECIAL. IS IT...IF YOU DON'T HAVE A TWO, THEN YOU..OH, TWO CARDS. THEN, IT'S NOT YOU, IT'S NOT YOU< IT'S RUTH. RUTH, IT'S YOUR TURN TO BEGIN.

3.4.1. Role assignment

In the following role playing text, the children negotiate the teacher role but in addition the anglophone adds the idea of taking turns in it.

(28) F: C'est la maîtresse. (Nell is getting out slate and chalk)

Nell: Toi ou moi? Quoi, la maîtresse? C'est quoi la ma^ tresse? Toi ou moi? YOU OR ME? WHAT'S THE TEACHER? YOU OR ME?

F: Comme tu veux. AS YOU WISH. YOU OR ME?

Nell: C'est moi un petit peu et c'est toi un petit peu. IT'S ME A LITTLE AND THEN IT's YOU.

F: C'est qui qui commence? WHO STARTS?

Nell: C'est qui qui commence? WHO STARTS?

F: à être l'élève. TO BE PUPIL.

Nell: Je ne comprends pas. I DON'T UNDERSTAND.

F: Qui c'est qui commence à être maîtresse. WHO STARTS OUT AS TEACHER?

Nell: C'est quoi la maîtresse? C'est moi le maîtresse premier...et donc toi le...et après toi le maîtresse Tu comprends? WHAT'S THE TEACHER? I'M THE TEACHER FIRST, THEN YOU. AFTER, YOU THE TEACHER. UNDERSTAND?

3.4.2. Arguments

The most ultimately taxing form of language use is an argument, when many disparate language resources may be marshalled. In the following episode between Chinese speakers, the English argument had a very simple structure, and finally when the repetitive idea was inadequate the children reverted to Chinese for the more complex insult. Just a fragment is given from a longer text in Ervin-Tripp 1981.

(29) B: My father, bigger your father.

C: You father big big big big big.

B: My father, uh, bigger you father.

C: My father my father like that! (stands, reaches high)

B: My father stronger your father.

C: My father like that! (arms wide)

B: Don't talk for--I hit you!

(In Chinese):

B: I'm gonna tell your father that you steal things!

C: When have I stolen things?

B: You, you stole Arthur's getting married thing (ring).

C: humh-uh!

B: You stole, you stole my car and give it to Arthur!

C: Your car! (sarcastic)

B: You, I hit you! Hit you! When we go outside, I'm gonna hit you!